Claims

- 1 54. (canceled)
- 55. (previously presented) A composition comprising water soluble peptides, wherein said peptides are obtained by:

oxidizing human or animal hair, human or animal nails, fur, hooves, or feathers, in an aqueous oxidizing solution;

filtering said aqueous oxidizing solution to obtain a water soluble portion;

substantially neutralizing said water soluble portion; and

adding a water-miscible organic solvent to said water soluble portion, such that a precipitate is formed;

wherein said precipitate comprises water soluble peptides;

and further wherein at least about 90% of said water soluble peptides are between about 300 and about 1300 daltons in molecular weight.

- 56. (previously presented) The composition of claim 55, further comprising the step of drying said precipitate to obtain a powder.
- 57. (previously presented) The composition of claim 55, wherein said oxidizing includes placing said hair, hooves, feathers, or human or animal nails in a solution comprising an oxidizing agent selected from hydrogen peroxide, peracetic acid, a percarbonate, a persulfate, chlorine dioxide, sodium peroxide, calcium peroxide, a perborate, or hypochlorite.
- 58. (previously presented) The composition of claim 55, wherein said oxidizing includes suspending said hair or feathers in a solution comprising from about 1 to about 32 volume percent peracetic acid or hydrogen peroxide.
- 59. (previously presented) The composition of claim 55, wherein said water-miscible organic solvent is methanol, ethanol, acetone, tetrahydrofuran or a combination thereof.

- 60. (previously presented) The composition of claim 55, wherein said water-miscible organic solvent is methanol.
- 61. (previously presented) The composition of claim 55, wherein said water-miscible organic solvent is ethanol.
- 62. (previously presented) The composition of claim 55, wherein said water soluble portion is concentrated up to about 10 fold prior to adding said water-miscible organic solvent.
- 63. (previously presented) The composition of claim 55, wherein said water-miscible organic solvent is added at a volume ratio of organic solvent to aqueous solution of from about 60:1 to about 100:1.
- 64. (previously presented) The composition of claim 62, wherein said water-miscible organic solvent is added at a volume ratio of organic solvent to aqueous solution of from about 6:1 to about 10:1.
- 65. (previously presented) The composition of claim 55, wherein the process comprises oxidizing human hair in an aqueous oxidizing solution.

66. (canceled)

- 67. (previously presented) The composition of claim 55, wherein said water soluble peptides have a mean molecular weight of about 850 daltons.
- 68. (previously presented) The composition of claim 55, wherein said water soluble peptides comprise from about 3.8 to about 4.78 weight percent sulfur.
- 69. (withdrawn) The composition of claim 55 wherein said precipitate is contained in a gel, lotion, paste, cream, or aqueous solution.
- 70. (withdrawn) The composition of claim 55, wherein said precipitate is a component of a wound dressing.
- 71. (withdrawn) The composition of claim 70, wherein said wound dressing is a sheet comprising a keratin derived product.

- 72. (withdrawn) The composition of claim 70, wherein said wound dressing is an adhesive bandage.
- 73. (withdrawn) The composition of claim 55, wherein said precipitate is a component of a tissue engineering scaffold.
- 74. (withdrawn) The composition of claim 73, wherein said tissue engineering scaffold comprises an insoluble keratin derived product.
- 75. (withdrawn) The composition of claim 55, wherein said precipitate is contained in or associated with a hydrogel.
- 76. (withdrawn) The composition of claim 75, wherein said hydrogel comprises a keratin derived hydrogel.
- 77. (withdrawn) A composition for topical application to skin of a human or animal subject, said composition comprising the soluble peptides of claim 55, contained in a lotion, gel, paste, cream, or aqueous solution.
- 78. (withdrawn) The composition of claim 77, wherein said water soluble peptides are obtained from human hair.
- 79. (withdrawn) The composition of claim 78, wherein said human hair is the hair of said human subject.
 - 80. (withdrawn) The composition of claim 77, wherein said skin is damaged skin.
- 81. (withdrawn) The composition of claim 80, wherein said damaged skin includes a wound, a rash, diaper rash, a burn, a sunburn, a cut, an abrasion, a puncture, a sore, a bedsore, an ulcer, or wrinkled skin.
- 82. (withdrawn) A method of treating damaged epithelial tissue of a human or animal subject comprising contacting said damaged epithelial tissue with the composition of claim 77.

- 83. (withdrawn) The method of claim 82, wherein said damaged epithelial tissue includes a wound, a rash, diaper rash, a burn, a sunburn, a cut, an abrasion, a puncture, a sore, a bedsore, an ulcer, or wrinkled skin.
- 84. (withdrawn) The method of claim 82, wherein said water soluble peptides are obtained from human hair.
- 85. (withdrawn) The method of claim 84, wherein said human hair is the hair of said human subject.
- 86. (withdrawn) A wound dressing comprising the composition of claim 55 contained in, or adhered to a sheet, film or fabric dressing.
- 87. (withdrawn) The wound dressing of claim 86, wherein said sheet, film or fabric comprises a keratin derivative.
- 88. (withdrawn) The wound dressing of claim 86, wherein said wound dressing is an adhesive bandage.
- 89. (withdrawn) A cell growth scaffold comprising a keratin derived sheet material, porous material or hydrogel, and further comprising a composition of claim 55 contained in, or adhered thereto.
- 90. (withdrawn) A composition for the promotion of healing of damaged epithelial tissue comprising the composition of claim 55 contained in a hydrogel.
- 91. (withdrawn) The composition of claim 90, wherein said hydrogel is a keratin hydrogel.
- 92. (withdrawn) The composition of claim 90, wherein said epithelial tissue is skin, nasal, oral, gastro-intestinal, anal, vaginal, ear, eye, lung, or urogenital epithelial tissue.
- 93. (previously presented) A composition for topical application to skin of a human or animal subject, wherein said composition comprises the powder of claim 56.

- 94. (withdrawn) The composition of claim 93, wherein said powder is mixed with an absorbent material.
- 95. (withdrawn) The composition of claim 93, wherein said powder is mixed with a non-absorbent material.
- 96. (withdrawn) The composition of claim 95, wherein said non-absorbent material is a water insoluble keratin powder.